

1 30. (New) A method for producing a discharge lamp with electrodes formed by the
2 steps of:

3 a winding step for winding, with the same pitch, refractory metal wires around a core
4 member and forming n layers of coils one by one, n being larger than one;

5 a shape stabilizing step for stabilizing a shape of the n number of layers of coils;

6 a cutting step for cutting the formed n layers of coils and the core member to provide a flat
7 tip surface;

8 a removing step for removing the core member after the cutting step;

9 a rod inserting step for inserting an electrode rod into a space from which the core member
10 has been removed, the electrode rod being made of refractory metal;

11 a welding step for fixing the formed n layers of coils to the inserted electrode rod; and

12 a fixing step for mounting a pair of identical electrodes within a light emitting tube so that
13 tips of the electrodes are spaced a length less than 2.5 mm from each other.

1 31. (New) The method of claim 30, wherein the length is approximately 0.6 mm.

1 32. (New) The method of claim 32

2 wherein the n layers include a $(p-1)$ th layer, a p th layer, and $(p+1)$ th layer, which are
3 formed by refractory metal wires with diameters of $P-1$, P , and $P+1$ respectively, p satisfying an
4 inequality $1 < p < n$, inequalities $p < p-1$ and $p < p+1$ being satisfied, and

5 wherein the three refractory metal wires are wound to form spaces that are each surrounded
6 by (a) the $(p-1)$ th layer (b) adjacent turns in a coil of the p th layer, and (c) the $(p+1)$ layer.